Space Weather Forecast

Issued on Thursday, 04 April 2024 at 01:12 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

---

Space Weather Forecast Headline: Solar activity Low or Very Low. Chance of G1 Minor Storm intervals Day 1 (04 Apr), declining Day 2 (05 Apr) due to coronal hole fast winds.

Analysis of Space Weather Activity over past 24 hours

Solar Activity: Activity has been Very Low with no significant solar flares. There are currently four small and simple sunspot regions on the disc, none of which show any magnetic complexity at present.

No Earth-directed Coronal Mass Ejections (CMEs) were observed in available imagery.

Solar Wind / Geomagnetic Activity: Solar winds showed waning fast wind conditions. Solar wind speeds were initially slightly elevated, easing to ambient during the period and are now near 350km/s. Total Interplanetary Magnetic Field (IMF) was weak but with a slight increasing trend. The north-south component varied weakly. Geomagnetic activity was Quiet to Unsettled (Kp1-3).

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) was at background levels with no solar radiation storms observed.

Four-Day Space Weather Forecast Summary

Solar Activity: Low to Very Low activity is expected, with a slight chance of isolated Moderate-class flares given the unknown risk from over the east limb, with this increasing slightly through the period.

Solar Wind / Geomagnetic Activity: There are no Earth-directed CMEs currently expected. Solar wind speeds at Earth have returned to slow levels after the recent weak coronal hole fast wind. The onset of a likely stronger fast wind from two larger coronal holes is expected during Day 1 (04 Apr). Ongoing fast wind effects are then expected into Day 2 (05 Apr), before gradually easing towards background levels by the end of the period.
Geomagnetic activity is forecast to be initially Quiet on Day 1 but increasing to become generally Unsettled to Active with a chance of G1/Minor Storm intervals due to the fast wind onset, with activity then decreasing during Day 2 to become largely Quiet to Unsettled by Day 3 (06 Apr).

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is expected to remain near background levels.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

© Crown Copyright 2024. All Rights Reserved.

Met Office

Space Weather Forecast

Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	50	30	5	1
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	5	10	15	20
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

© Crown Copyright 2024. All Rights Reserved.